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Morphology of content words

Section 6

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Morphology of content words

Section 6

Denis Paperno

- 1 Much of Beng's inflexional and derivational morphology is suffixal. Beng suffixes include the inflexional *-nā* (affirmative perfect), *-lè* (stative), *-léló* (progressive), *-sà* (negative perfect), and the derivational *-lɛ* (nominalization), *-ya* (location nominalization), *-pɔ* (means nominalization), *-yà* (goal converb), *-lí* (agent nominalization), *-lē* (participle), *-dēŋ* (profession suffix), *-lěí* (suffix that forms temporal adverbs from nouns that refer to parts of day cycle, e.g. *drúlěí* 'in the morning' from *drú* 'morning').
- 2 Beng also has elements that could be labeled as 'verbal prefixes', which precede the verb stem and form a semantic unit with it, e.g. *wó* 'in' within *wólā* 'to ask about,' literally 'to ask in,' *yé* 'mouth' on *yébū* 'to feed,' literally 'to carry mouth'. Such 'prefixes' do not change their tone in the low tone form. However, structurally such elements are not true prefixes but (part of) a direct object of the verb since they can be separated from the verb stem under passivization. The semantic object of predicates like *wólā* 'to ask about' can therefore be seen structurally as the possessor of the dummy noun rather than a full direct object.
- 3 The morphemes discussed here as suffixes are defined on distributional basis, with the main criterion being separability: unlike free standing morphemes from closed classes, e.g. personal pronouns, determiners, postpositions, etc., suffixes cannot be separated from the heads they combine with. For instance the negation marker follows the main verb of a sentence but can be separated from it by adverbs, indirect objects, etc.; on the other hand, verbal suffixes of positive or negative perfect, stative, or nominalization suffixes, always attach at the end of the verb stem and cannot be separated from it by any material. Similarly, while determiners and postpositions can be separated from the noun they combine with by adjectives, suffixes *-dēŋ* and *-lěí* always attach to the noun stem and don't allow for interveners.
- 4 I also discuss below one element, *ná*, that fails to show unseparability from the head it combines with, but has tonal behavior typical for suffixes. So *ná* cannot be

characterized as a suffix but rather as a phrasal suffix, since it combines with phrases rather than stems; see examples below.

6.1. Tonal changes in suffixation

6.1.1. Mobile tone suffixes

- 5 Some suffixes bear a high or a low tone depending on context. Those suffixes, which I call mobile tone suffixes, have a high tone after H, LH, MH, i.e. after a high tone element, and a low tone otherwise.
- 6 Another unit that exhibits the same tonal behavior is the attributive marker *n̄*. This phrasal suffix attaches to noun phrases (which can consist of a single noun), forming adjective phrases with the meaning ‘having X’, ‘characterized by X’, for example: *jrǎ* ‘poverty’ – *jrǎ n̄* ‘poor’, *blū* ‘sorcery’ – *blū n̄* ‘sorcerer’, *léj plāj* ‘two children’ – *léj plāj n̄* ‘having two children’. These constituents exhibit the behavior of adjective phrases: they typically modify a noun (although, as with other adjectives one also finds them substantivized), and when modifying a noun they are always postposed rather than preposed; as discussed in 7.2, fixed position with respect to the modified noun is a feature distinguishing nouns from adjectives in Beng. When attaching to placenames, the attributive marker *n̄* produces the meaning ‘resident of’, e.g., *Àságbè* ‘Ouassadougon’ – *Àságbè n̄* ‘resident of Ouassadougon’, *bā wó* ‘savanna’ – *bā wó n̄* ‘savanna dweller’. The attributivizer can also attach to full noun phrases with determiners:

(21)	<i>ŋ</i>	<i>(gbě</i>	<i>bÉĒ</i>	<i>bìlè)</i>	<i>n̄</i>	<i>dō</i>	<i>yè</i>	<i>gblē.</i>
	1SG :PST+	village	big	this	ATR	one	see:L	yesterday
	‘I saw one resident of this big village yesterday’.							

6.1.2. Low tone suffixes

- 7 One syllable suffixes with a low tone undergo a shift of a H tone element of a preceding contour tone, so that LH.L>L.HL and MH.L>M.HL. Examples: {*drũ* (LH) + *sà* [l]} ⇒ /*drũ* [l] *sà* (HL)/ (negative perfect form of the verb ‘to walk’), {*zrǎ* (MH) + *yà* [l]} ⇒ /*zrǎ* (M) *yà* (HL)/ (goal converb of the verb ‘to lose’). In verbal reduplication, the right reduplicant also shows tonal behavior of a low tone suffix, cf. the reduplicated form of the same verb ‘to walk’ {*drũ* (LH) + *drũ* [l]} ⇒ /*drũ* [l] *drũ* (HL)/ ‘to walk back and forth’.

6.1.3. Other suffixes

- 8 Suffixes with lexical high (*-lí*, agent nominalization) or mid tone (*-n̄*, perfect), show no tone alternations.

6.1.4. Stems ending in L tone

- 9 The final L tone element of a verb stem is deleted before the attachment of suffixes. If the L is part of a contour tone, L simplifies, and the contour tone becomes level, e.g. *túà* ‘to leave’ – *túá-lé* (nominalization). If the low tone characterizes a whole syllable, the tone of the preceding syllable spreads to replace L. The latter situation is typical for reduplicated verbs, cf. examples of nominalization of such verbs: *wláwla-lé*, *m̃m̃l̃* ‘to suck’ – *m̃m̃l̃-lè*.

6.1.5. The verb *blö* ‘to press out’

- 10 The verb *blö* ‘to press out’ changes its lexical tone from MH to H when combining with suffixes, cf. the progressive form *blóóló* instead of the regular **blóóló*, nominalization *blólé* instead of the regular **blólé* etc.

6.2. Nominalization in *-lé*

- 11 The suffix *-lé* forms action (or event) nominalization of verbs:

(22)	<i>[Drē wō-lē]</i>	ò	<i>gēŋ.</i>
	work	do-NMLZ	3SG:HAB+ good
	‘To work is good’.		

(23)	À	<i>gbě</i>	<i>tá-lé</i>	<i>zá</i>	<i>fú</i>	<i>āŋ</i>	<i>wó.</i>
	3SG	village	leave-NMLZ	matter	surprise:L	1PL	in
	‘His departure from the village took us by surprise’.						

(24)	<i>i</i>	<i>ó</i>	<i>[báj klá-lé]</i>	<i>lā-àló</i>	<i>Kùàjó</i>	<i>ñì.</i>	
	Kofi	ST+	trap	set-NMLZ	show-PROG	Kouadio	BENEF
	'Kofi teaches Kouadio to set traps'.						

(25)	<i>Bè-lé</i>	<i>kā</i>	<i>ó</i>	<i>m̃</i>	<i>m̃?</i>
	run-NMLZ	need	ST+	2SG	CONT
	‘Do you want to run?’				

- 12 The suffix *-lɛ* nominalizes various predicates. It can attach to verbs (*nḡ* ‘to come’ – *nḡlɛ* ‘(the) coming’), adjectives (*gɛḡ* ‘beautiful’ – *gɛnɛ* ‘beauty’), and a few nouns (*lɔ* ‘slave’ – *lɔlɛ* ‘slavery’).
- 13 In some usages, verbal stems with the suffix *-lɛ* function like participles, relativizing the semantic object:

(26)	<i>gḡ</i>	<i>wi-lɛ</i>
	foot	swell-NMLZ
	‘swollen foot’ (can also be interpreted as ‘swelling of feet’)	

(27)	<i>ḡ-ó</i>	<i>zrḡḡ</i>	<i>kásiɛ-lɛ</i>	<i>lú.</i>
	1SG-ST	corn	roast-NMLZ	buy
	‘I’ll buy roasted corn’.			

(28)	<i>ḡ-ó</i>	<i>ḡ</i>	<i>gḡ</i>	<i>yrɔ-lɛ</i>	<i>búénɛlɔ.</i>
	1SG-ST+	1SG	foot	wrench-NMLZ	steam.PROG
	‘I am steaming my wrenched foot’.				

- 14 Interestingly, there are examples where the definite article *lɛ* and the demonstrative element *bì*, which normally follow all adjectives in a noun phrase, precede the “participial” nominalization in *-lɛ*, and the semantic head can even be doubled by an object pronoun, as is regular for direct objects:

(29)	<i>ḡ-ó</i>	<i>[[zrḡḡ</i>	<i>bì-lɛ]_{NP}</i>	<i>ɑː</i>	<i>kásiɛ-lɛ]_{NP}</i>	<i>lú.</i>
	1SG-ST+	corn	this-DEF	3SG	roast-NMLZ	buy
	‘I will buy this roasted corn’.					

- 15 The determiners can also follow the “participial” deverbal noun:

(30)	<i>ḡ-ó</i>	<i>[zrḡḡ</i>	<i>kásiɛ-lɛ</i>	<i>bì-lɛ]</i>	<i>ɑː</i>	<i>lú.</i>
	1SG-ST+	corn	roast-NMLZ	this-DEF	3SG	buy
	‘I will buy this roasted corn’.					

- 16 Native speakers report a subtle contrast between (29) and (30), whereby (29) can be interpreted as ‘I will buy this corn roasted’. The exact syntactic structure of (29) is not entirely clear. We might be dealing with some kind of partitive or possessive construction (‘the roast of this corn’), as indicated by the tentative syntactic bracketing in (29). On the other hand, the translation of (29) suggests that *kásiélé* might be a secondary predicate, although the preverbal position of *kásiélé* contrasts with all well-established instances of secondary predicates in Beng (see 12.2.4), which follow the main verb of the sentence rather than precede it as does *kásiélé* in (29). I leave the question of whether the preverbal position of secondary predicates, as attested in cognate languages, is also available in Beng, for further study. Whatever the exact syntactic structure of (29), it is clear that the semantic contrast is based on the relative syntactic scope of the determiner and the “participle”: in one case, one talks about the (*this corn*) *roasted*, while in the other case we hear about *this (roasted corn)*, reflecting the ordering of the two attributes of corn.

6.3. Locative nominalization in *-ya*

- 17 The mobile tone suffix *-ya* combines with verbs, adjectives, all locative nouns including locative postpositions, and a few nouns denoting social relations. From the distributional viewpoint derivatives in *-ya* are locative nouns, i.e. nouns that can be used in adverbial positions without a postposition:

(31)	ŋ	nú	pɔ̃	blē-ya.
	1SG:PST+	come:L	thing	eat-PLC
	‘I came to the eating place’.			

- 18 When derived from a verb, the *-ya* form refers to the place or time of an event. There’s a systematic ambiguity between the temporal and the spacial readings, although context often helps to differentiate the two:

(32)	ŋ-ó	zrō-yá	dɔ̃-òlóló.
	1SG-ST+	wash-PLC	build-PROG
	‘I build a bathing place’.		

(33)	Mǎ	zrō-yá	yè	é.
	1SG:PST-	wash-PLC	have:L	NEG
	‘I had no time (or no place) to wash’.			

- | | | | | | | | | |
|------|---|---------------|------------|-------------------|------------|--------------|-----------|-------------|
| (34) | $\eta\grave{o}$ | <i>tri-yá</i> | <i>nǎ́</i> | $\eta\grave{o}-ó$ | <i>dǎ́</i> | $\bar{\eta}$ | <i>ló</i> | <i>nḱ̄.</i> |
| | 3PL | return-PLC | TOP | 3PL-ST | find | 1SG | on | here |
| | 'On the way back (literally 'returning') they will find me here'. | | | | | | | |

- | | | | | | | | |
|------|-------------------------------------|------------|--------------|-----------|-----------------------|-----------------------|-------------|
| (35) | <i>i_{ij}</i> | <i>DrĒ</i> | <i>wō-yà</i> | <i>ná</i> | <i>má_i</i> | <i>ŋò_j</i> | <i>yè</i> . |
| | | work | do-PLC | TOP | 1SG:PST+ | 3PL | see:L |
| | 'I saw them when I (*they) worked'. | | | | | | |

- | | | | | | | | |
|------|--------------------------------|-----------------------|-----------------------|--------------|----------------|-----------------|----------------|
| (36) | $\eta\dot{o}_j$ | $dr\bar{\varepsilon}$ | $w\bar{o}-y\grave{a}$ | $n\acute{a}$ | $m\acute{a}_i$ | $\eta\dot{o}_j$ | $y\grave{e}$. |
| | 3PL | work | do-PLC | TOP | 1SG:PST+ | 3PL | see:L |
| | 'I saw them when they worked'. | | | | | | |

- | | | | | | | | | | | | | |
|------|-----------------------------------|------|-----|-----|---------------|-----|---|-------|-----|----------|-----|-----|
| (37) | Bà̀nɛ̀ | yā | ná | à | gɛ̃ɲ-yà | ɲɛ̃ | ó | lé | à | lòḳlɛ̃ | lè | ē |
| | Bane | EMPH | TOP | 3SG | beautiful-PLC | FOC | 3SG:PST+ | COP:L | 3SG | neck | DEF | FOC |
| | ‘Bane’s neck makes him beautiful’ | | | | | | literally: As for Bane, it is the place of his beauty, his neck). | | | | | |

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(38a)	KoꞤsá	taꞤ-nā	wlaꞤ.
	Kosan	3SG:PST+:go-PRF	house
	'Kosan has gone home'.		

(38b)	KoꞤsá	taꞤ-nā	wlaꞤ-yaꞤ.
	Kosan	3SG:PST+:go-PRF	house-PLC
	'Kosan has gone towards home'.		

(39a)	KoꞤsá	taꞤ-nā	ziꞤeꞤ	luꞤ.
	Kosan	3SG:PST+:go-PRF	kapok	under
	'Kosan has gone under the kapok tree'.			

(39b)	KoꞤsá	taꞤ-nā	ziꞤeꞤ	luꞤ-yaꞤ.
	Kosan	3SG:PST+:go-PRF	kapok	under-PLC
	'Kosan has gone towards the area under the kapok tree'.			

(40a)	ó	jé	wlaꞤ	weꞤ.
	3SG:PST+	pass	house	there
	'He passed through the house'.			

(40b)	ó	jé	wlaꞤ-yaꞤ	weꞤ.
	3SG:PST+	pass	house-PLC	there
	'He passed by the house'.			

- 24 Finally, -ya derived forms from some nouns denoting social relations adverbs with the meaning 'according to the social relation X':

(41)	ŋó	ŋò	gbaꞤ	blě	lè	siꞤaꞤ-yaꞤ.
	3PL:PST+	3PL	give:L	wine	DEF	in.law-PLC
	'They gave them wine according to in-lawhood' (e.g. everyone gave wine to his mother-in-law).					

(42)	Dāṁ	ní	yraṁmaṁ	nā	ṁò	léṁ	nṁṁ	boṁ	soṁlaṁsiṁ	lò-yaṁ
	war	DEF	time	TOP	3PL:HAB+	child	PL	extract	soldier	slave-PLC
'During war, one selected children for military service by slave status' (in other words: One chose slave kids to become soldiers).										

6.4. Predicative forms of verbs

- 25 Beng uses six different verb forms in the predicate position, distinguished on the basis of tense, aspect, modality, and polarity. For more information on their usage, see 12.1.
- 26 Two of the predicative forms do not bear affixes and are distinguished by tone. In one of those affix-free forms, the tone is lexically specified. I call this form the **base form**. The other form bears a low grammatical tone; I call it the low tone form. Here are some examples of the two affix-less forms of several verbs: *mī*, *mī* 'to drink'; *tá*, *tà* 'to go'; *dā*, *dà* 'to drop'; *zrō*, *zrò* 'to wash'; *jātē*, *jàtè* 'to respect'. Several verb stems keep a high tone on the last syllable constant in the low tone form, compare *yāló*, *yàló* 'to stand up', *mēlá*, *mèlá* 'to fall on the ground'. Paesler (1989) calls such syllables 'suffixes', although it might be more precise to characterize them as 'suffixoids' as there aren't sufficient reasons to consider them distinct morphemes from the synchronical viewpoint: they are not productive and it is hard to differentiate their exact semantic contribution. All verbs with suffixoids share the semantics of movement; compare the status of an etymologically identical element in Tura (Idiatov 2009).
- 27 Four predicative forms bear suffixes, and can be given more functional labels: stative; affirmative perfect; negative perfect; and progressive.
- 28 The stative suffix *-lè* and the negative perfect suffix *-sà* are low tone suffixes. The suffix of affirmative perfect *nā* (or sometimes *ā*) bears a constant mid tone. The suffix *nā* also differs from all other suffixes in that the stem-final low tone of the verb is not elided before it, contra the general rule (cf. 6.1.4): *mīmī* 'to suck' – *mīmī nā*, *drùdrù* 'to walk a lot' – *drùdrù nā*, *túa* 'to leave' – *túaṁ nā*. An idiosyncratic exception is the verb *gūāṁ* 'to remain', perfect form *gūā nā*.
- 29 The progressive marker *-léló* consists of two elements: *-ló*, grammaticalized from the postposition 'on', and *-lè*, derived from the nominalization marker, which bears a mobile tone and has surface variants *-lè* and *-ε* (the latter can be seen as the result of [l] deletion). The vowel in the *-ε* variant normally assimilates to the immediately preceding vowel in nasality and quality. It becomes *a* after *a* and *o* after rounded vowels, and remains *ε* after front vowels.
- 30 Along with mobile tone, the progressive form is also attested with low tone on the *-lè* / *-ε* component. So along with the more frequent progressive form *tááló*, the verb *tá* 'to go' has a rare form *táàló*, the progressive *drùóló* of *drū* 'to walk' has a rare variant *drùóló*, etc.
- 31 Verbs with a low tone on the last syllable and a mid tone on the penultimate syllable (mostly reduplicated verbs), have a special tonal behavior in the progressive. Unlike in other suffixed forms, the final low tone of those verbs is not deleted, cf. the progressive

$m̃m̃l̃éló$ of $m̃m̃l̃$ ‘to suck’ vs. L deletion in the nominalization $m̃m̃l̃è$, location nominalization $m̃m̃l̃yà$ etc.

- 32 The progressive marker is clearly segmentable into the nominalization suffix $-l̃é$ and the locative postposition $ló$. However, the [l] deletion and the abovementioned tonal idiosyncrasies (the $m̃m̃l̃éló$ and $drùóló$ types) formally distinguish the progressive from nominalization.

6.5. The goal converb

- 33 The goal of motion converb is derived with the low tone suffix $-yâ$, distinct from the location nominalization suffix $-ya$ that bears a mobile tone. For the verbal stems ending in a non-high tone element the two forms are identical. E.g. $m̃yâ$, the location nominalization, is at the same time the goal converb of $m̃$ ‘to drink’. For stems ending in a high tone, the two forms differ, cf. $jóyá$ ‘time or place of talking’ (locative nominalization) vs. $jóyâ$ ‘in order to talk’ (goal converb) from $jó$ ‘to talk’. The goal converb’s distribution is limited to combinations with only three motion verbs. With the verbs $tá$ ‘to go’ and $ñ$ ‘to come’ the converb indicates the goal of motion. The combination of these two verbs with the goal converb can also be used as a periphrastic future construction similar to the English *to be going to*, see 12.1.5. With the verb $bō$ ‘to come (from)’ the goal converb indicates the subject’s actions at the point of departure:

(43a)	$ŋ̃$	$ñỹ$	$drù-yâ$.
	1SG:PST+	come:L	walk-GL
	‘I came for a walk’.		

(43b)	$(*ŋ̃)$	$dr̃ē$	$wò$	$drù-yâ$.)
	1SG:PST+	work	do:L	walk-GL
	(*I worked to walk.)			

(44)	$ŋ̃$	$bó$	$drù-yâ$.
	1SG:PST+	come.form:L	walk-GL
	‘I came from a walk’.		

6.6. Agent and means nominalizations

- 34 In addition to the event nominalization in $-l̃é$ and the location/time nominalization in $-ya$, which we have already discussed, Beng also has suffixes for the agent and the means nominalizations.

- 35 The means nominalization, formed with the mobile tone suffix *-pɔ* (derived from the noun *pɔ* ‘thing’), can refer to the instrument, the means, or the cause of an event:

(45)	Bèya: 𐌲𐌶𐌰	à	lēŋ	túá-pɔ	lé	blě	lè.
	Beyan	3SG	woman	leave-MEN	3SG:PST+COP:L	wine	DEF
‘Alcohol was the reason of Beyan’s divorce’.							

(46)	ŋ	yā-pɔ	dō	lù.
	1SG:PST	move-MEN	one	buy:L
‘I bought an instrument for moving around’ (this could be shoes, a car, a bicycle etc.).				

- 36 The agent nominalization in *-lí* relativizes the subject and can have arbitrary aspectual or temporal interpretation:

(47)	ŋ	pɔ	blē-lí	lè	yè.
	1SG:PST+	thing	eat-AG	DEF	see:L
‘I saw the eater’ (the one who eats / was eating / will eat etc.).					

- 37 But usually, the agent nominalization refers to the habitual rather than episodic agent:

(48)	pɔ	běē	blē-lí,	drē	wō-lí,	sɔŋ	dē-lí,	jó-lí
	thing	big	eat-AG	work	do-AG	human	kill-AG	talk-AG
‘glutton, worker, murderer, talker’								

(49)	Dēlā	ó	lé	vlòŋvló-lí	běē	dō.
	Dela	3SG:PST+	COP:L	worry-AG	big	one
‘Dela (male name) is easy to disturb’. (literally: ‘Dela is a great worryer’.)						

6.7. Relics of the participle

- 38 The suffix *-lē* forms adjectives with resulting state meanings from several verbs. The verb’s stem changes its tone from M to L when combining with *-lē*. Here are all the attested examples:

gā ‘to die, to dry out’ – *gālē* ‘dead, dry’

mā ‘to boil’ – *mālē* ‘boiled’
māmā ‘to ripen’ – *māmālē* ‘ripe’
ŋūū ‘to burn’ – *ŋūūlē* ‘burned’
pā ‘to fill’ – *pālē* ‘filled’
tā ‘to close’ – *tālē* ‘closed’
trā ‘to redden, to ripen’ – *trālē* ‘red, ripe’
vō ‘to rot’ – *vōlē* ‘rotten’

- 39 Suffix *-lē* combined with the verb *bā* ‘to bear fruit’ produces a somewhat irregular meaning: *bālē*, *pōbālē* ‘seeds, plants’

6.8. Reduplication

6.8.1. The formal aspect of reduplication

- 40 In Beng, reduplication is generally full, applying to stems of adjectives, verbs, numerals, and some adverbs and nouns. The major exception to the full reduplication pattern is the fact that in verb reduplication, only the segmental base is repeated. The tonal pattern of the original stem stays on the first part of the reduplicated verb, while the second part gets a low tone: *mī* ‘to drink’ – *mīmī* ‘to suck’, *gā* ‘to dry out’ – *gāgā* ‘to dry out (referring to multiple objects)’, *só* ‘to chew’ – *sósó* ‘to thin down’, *yāló* ‘to stand up’ – *yālólóló* ‘to stand up (referring to multiple people)’. If the last syllable of the original verb stem has a contour tone, the latter component of the contour tone spreads to the following syllable, by general rule (see 6.1.2): *fā* ‘to strip’ → *fāfā* → *fāfā* ‘to strip repeatedly’, *dā* ‘to drop’ → *dādā* → *dādā* ‘to put in (multiple objects)’, *blā* ‘to stick in’ → *blāblā* → *blāblā* ‘to stick in (multiple objects)’. Reduplicated verb stems form all predicative and derivational verb forms by general rules.
- 41 Adjective reduplication is usually complete with respect to both segmental and tonal patterns, compare: *gēē* ‘beautiful’ – *gēēgēē* ‘beautiful (plural)’, *cā* ‘short’ – *cācā* (plural), *blúá* ‘blue’ – *blúáblúá* (plural). However, long vowels at the end of adjectives can shorten in reduplicated forms. The conditions of this shortening are not clear. Sometimes reduplicated adjectives do not exhibit any shortening, cf. *fēfē* ‘very narrow’ (in reference to a hole) from *fē* ‘narrow’ (in reference to a hole), *pīpī* ‘very tiny’ from *pī* ‘tiny’, *fóófóó* ‘very deep’ from *fóó* ‘deep’, *pòòpòòpòòpòò* ‘very malleable’ from *pòòpòò* ‘malleable’. Sometimes shortening occurs only in the first part of the reduplicated form, cf. *tētētē* ‘very red’ from *tētē* ‘red’, *fífí* ‘very narrow’ from *fí* ‘narrow’, *kótíkótí* ‘very little’ from *kótí* ‘little’, *títí* ‘very black’ from *tí* ‘black’, *yóyó* ‘very cool’ from *yó* ‘cool’. The third group of adjectives shorten the final vowel in both parts of the reduplicated form: *bètèbètè* ‘very slow’ from *bètè* ‘slow’, *kpòsòkpòsò* ‘very grainy’ from *kpòsò* ‘grainy (texture)’, *mòtòtò* ‘very soft’ from *mòtò* ‘soft’, *nòfòfò* ‘very elastic’ from *nòfò* ‘elastic’. For *púú* ‘white’, two reduplicated forms are attested in my notes, *púpúú* in the sense of ‘very white’ and *púpú* in the sense of ‘white (plural)’. It is not clear if there is a regular relation between the shortening pattern and the intensive vs. plural interpretation that this pair of examples seems to point at.
- 42 Stem-final /ŋ/ can cause a change in the first consonant of the second half of a reduplicated form. Some of those forms exhibit ηC simplification (see 4.2.1), e.g. *plāmlā* ‘two each’ < /*plāŋ plāŋ*/ (reduplication of *plāŋ* ‘two’), *būāmūā* ‘thirty each’ < /*būāŋ būāŋ*/ (reduplication of *būāŋ* ‘thirty’); such simplification is not regular, cf. *būkējēsíéjébūkējēsíéjé* ‘eighty each’ (reduplication of *būkējēsíéjé* ‘eighty’) without

simplification. Fricatives are not subject to ηC simplification but undergo voicing after / η / in a reduplicated form, e.g. $f\grave{o}\eta v\grave{o}\eta$ ‘cloudy’ < / $f\grave{o}\eta f\grave{o}\eta$ / (reduplication of $f\grave{o}\eta$ ‘having shade’); $s\acute{o}\eta z\acute{o}\eta$ ‘five each’ < / $s\acute{o}\eta s\acute{o}\eta$ / (reduplication of $s\acute{o}\eta$ ‘five’).

- 43 Two adjectives, $gl\bar{e}$ ‘difficult’ and $b\acute{e}\bar{e}$ ‘big’, are exceptions to full reduplication at the tone level. Their reduplicated forms are $gl\acute{e}gl\bar{e}$ and $b\acute{e}b\bar{e}$ respectively.

6.8.2. Semantics of reduplication

- 44 The semantic effect of reduplication is similar across parts of speech, always adding a quantitative component to the meaning. In adjectives, reduplication may indicate plurality (‘more than one object’), cf. (50a) and (51), or property intensity (52b):

(50a)	$s\grave{o}\eta$	$g\bar{e}\eta\sim g\bar{e}\eta$	$(n\grave{u}\eta)$
	person	beautiful~PL	PL
	‘handsome people’		

(50b)	$s\grave{o}\eta$	$g\bar{e}\eta$	$n\grave{u}\eta$
	person	beautiful	PL
	‘handsome people’		

(51)	$s\grave{o}\eta$	$gbl\bar{e}\eta\sim gbl\bar{e}\eta$	//	$gbl\bar{e}\eta$	$n\grave{u}\eta$
	person	tall~PL		tall	PL
	‘tall people’				

(52a)	$g\bar{o}\eta$	$d\acute{o}i$
	man	first
	‘the first man’	

(52b)	$g\bar{o}\eta$	$d\acute{o}i\sim d\acute{o}i$
	man	first~very
	‘the very first man’	

- 45 For some adjectives, the reduplicated form is used only in the function of plural, cf. the ungrammatical NP $*s\grave{o}\eta\ gbl\bar{e}\eta\ gbl\bar{e}\eta\ d\bar{o}$ ‘one (very) tall person’.

- 46 The adjective *bÉĒ* ‘big’ is unique in restricting the non-reduplicated form to the singular and allowing only the reduplicated one in the plural (*kló* ‘little’ shows a similar number distinction but produces the plural form by suppletion, not reduplication). Unlike *gblĒĵ*, which shows variation in the plural, *bÉĒ* has complementary distribution of the two forms:

(53a)	<i>gɔ̃ĵ</i>	<i>bÉĒ</i> (/ * <i>bÉ~bĒ</i>)	<i>dō</i>
	man	big / *big~PL	one
	‘one big man’		

(53b)	<i>gɔ̃ĵ</i>	<i>bÉ~bĒ</i> (/ * <i>bÉĒ</i>)	<i>nùĵ</i>
	man	big~PL / *big	PL
	‘big men’		

- 47 Apart from irregular idiomatic meaning, **verb reduplication** can add iterativity, as in (54b), or plurality of a participant, as in (55b,d):

(54a)	<i>ŋ-ó</i>	<i>drù-óló.</i>
	1SG-ST+	walk-PROG
	‘I am walking’.	

(54b)	<i>ŋ-ó</i>	<i>drù~drú-óló.</i>
	1SG-ST+	walk~ITER-PROG
	‘I am walking (repeatedly back and forth)’.	

(55a)	<i>Ǿ</i>	<i>bè-éíló.</i>
	3SG:ST+	run-PROG
	‘He is running’.	

(55b)	<i>Ǿ</i>	<i>bè~bé-éíló.</i>
	3SG:ST+	run~ITER-PROG
	‘He is running (repeatedly back and forth)’ (event plurality).	

(55c)	ŋǒ	bè-éíó.
	3SG:ST+	run-PROG
	'They are running'.	

(55d)	ŋǒ	bè~bé-éíó.
	3SG:ST+	run~PL / ~ITER-PROG
	'They are running' (participant plurality) or 'They are running (back and forth)' (event plurality).	

- 48 Verb reduplication indicating participant plurality can be seen as ergative number agreement, i.e. the participant that controls the agreement is the direct object or the intransitive subject. This agreement is semantic rather than syntactic in nature.
- 49 Reduplication of cardinal numerals produces distributive ones:

(56)	Nǎ	gǒŋ	blɛŋà	ŋò	nǎ	plāmlāŋ	ŋǎŋǎŋ.
	DT	man	rich	3PL:HAB+	wife	two~DISTR	three~DISTR
	'Rich people used to have two or three wives each'.						

(Note two instances of ŋC simplification in reduplicated forms in example 56; see 4.2.1.)

- 50 Finally, the reduplicated form of temporal nouns (see 7.1 for a brief discussion of this class) also has a distributive interpretation ('on Fridays', 'nightly', etc.). This reduplication pattern is productive for the following classes of words: a) names of days in the traditional six-day week; b) names of days in the seven-day week borrowed from the Baule; and c) names of parts of the day cycle *pàló* 'daytime', *yēnǒ* 'evening', *drú* 'morning', *yrú* 'night'. Example of usage:

(57)	Yrú~yrú	nǎ	ŋ	yì.
	night~DISTR	TOP	1SG:HAB+	sleep
	'At night I (generally) sleep'.			

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